

A PROBLEM (PLAN B)

**THE DEVELOPMENT OF VISUAL AIDS
FOR TRAINING STUDENT EMPLOYEES
IN CERTAIN DISHROOM PROCEDURES
IN A COLLEGE CAFETERIA**

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THE DEVELOPMENT OF VISUAL AIDS
FOR TRAINING STUDENT EMPLOYEES IN CERTAIN
DISHROOM PROCEDURES IN A COLLEGE CAFETERIA

Unlimited

A Problem (Plan B)

Presented to the Faculty of the Graduate School
of Cornell University for the degree of
Master of Science

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By

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BIOGRAPHY

The writer was born at Reedville, Virginia, July 22, 1919. She graduated from Reedville High School in 1936 and received the degree of Bachelor of Science in Home Economics from Madison College in 1941.

In September, 1942 she completed her dietetic internship at the Henry Ford Hospital. For the following three months she worked as a therapeutic dietitian at Memorial Hospital, Danville, Virginia.

From December 1942 to March 1943 she was a Civil Service staff dietitian at the Walter Reed General Hospital, after which she served as a Medical Department Dietitian in the Army of the United States. In October 1947 she was integrated into the Women's Medical Specialist Corps, United States Army. She has served on assignments in this country as well as in the European Theater of Occupation.

Since September, 1950 she has been assigned to the Student Detachment, Headquarters First Army, Governors Island, New York and stationed at Cornell University where she has been a graduate student in the Department of Institution Management of the New York State College of Home Economics.

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The writer wishes to express her sincere appreciation to Professor Katharine W. Harris for her encouragement and guidance in developing the project presented in this study; to Professor Mabel A. Rollins for her interest and helpful suggestions; to the cafeteria supervisors for their assistance in the direction of student employees; to Assistant Professor James J. Lehning for his training in the preparation and proper use of audio-visual materials and for his advice concerning this project.

The writer also wishes to thank the full-time and student employees who participated in this project for their wholehearted interest and cooperation.

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INTRODUCTION

Prior to World War II the dishwashing room of most food service departments was one of the most neglected of all units. This was probably due to the fact that either the food service supervisor did not understand the importance of this unit or considered other matters more urgent. Supervisors now realize that through employee training programs, it is possible to achieve better dishroom procedure.

The main objective of dishwashing in an institution is to obtain clean china, glassware, silverware, and trays for patron protection and satisfaction. In addition it is important to achieve a minimum of breakage and/or chipping china, glassware, and trays and loss of silverware.

If dishroom employees are trained properly, the following results should be obtained; clean, sparkling tableware; a minimum of dishes to be rewashed; a low china, silver, and glass replacement; reduced turnover of employees; a low cost of dishwashing operation; and good sanitation practices throughout.

For the new employee, training is essential in order

that the worker may reach a maximum of efficiency in as short a period of time as possible by learning the essential procedures that apply to the assigned job. For the old employee, training or re-training, is indicated for improved performance on the job, or for the additional tasks that must be taken over when demands for service increase, or new procedures are introduced.

Dishroom operators, for the most part, are put to work with few or no instructions. This is one of the primary reasons why there is so much dissatisfaction with the performance of work in the dishroom. It is often thought that any job in the dishwashing unit is rather monotonous and certainly not challenging.

A serious problem of economic waste lies in the fact that many workers are not sufficiently interested in their jobs. Frequently the reason for this lack of interest is that little attempt is made to equip them properly, through training, for the successful performance of their work. Workers are likely to be more interested in those things which they understand best, and they manifest a distinct lack of interest in those things which they do not understand.

The training of employees helps accomplish an important personnel relations job, not only in the overall operation of a successful food service department, but

also for the dishwashing unit itself. Good human relations are essential in attaining employee happiness and satisfaction on the job. They help, also, in obtaining cooperation from employees. Cooperation tends to build teamwork and good morale among employees.

Titles of jobs or stations are important status symbols. This is true whether titles are conferred officially by the food service department or are given informally by co-workers. In the dishroom, it is more desirable to have employees called dishroom operators, dish machine operators, or dishroom employees rather than dishwasher since this latter term seems to place them in a low category with reference to other job titles.

A college cafeteria that employs many part-time workers in the dishroom has particular need for a training program and for visual aids to implement such a program. This problem was undertaken to meet this need. The major purposes of the study were:

1. To produce a series of black and white photographs which would depict certain dishroom procedures.
2. To develop a lesson plan using a selected group of the photographs to teach procedures used at the soiled dish and soiled glass stations.

3. To prepare job descriptions and job summaries for the dishroom positions.
4. To prepare a diagram of the dishroom which would show the location of the workers at the various stations.

PROCEDURE

This project was undertaken in the Home Economics Cafeteria, New York State College of Home Economics at Cornell University, during the spring term and summer session of 1951. The cafeteria serves approximately 2200 patrons per day: breakfast, 400; lunch, 1050; dinner, 750. The two cafeteria dining rooms are located on the ground floor; the dishroom is in the basement. Trays are sent from the dining rooms by means of vertical and horizontal trayveyors which terminate in the dishroom. The soiled dish table is at the end of the trayveyors, see floor plan, page 21.

Patrons carry their trays to a clearing table in the dining room. At this station the trays are stripped of paper napkins, straws, paper dishes, certain food waste, such as orange and melon rinds, milk bottles, glasses, and silver. The bottles, glasses, and silver are placed on separate aluminum trays. These trays are later sent on the trayveyor to the soiled dish table.

Most of the workers in the dishroom are part-time student employees. Approximately 4 students work at the breakfast meal, 9 at lunch, and 8 at the evening meal.

Two full-time employees function as supervisor and foreman respectively. Due to class schedules and activities, a different crew is scheduled at each meal. Skill and efficiency in performing simple, repetitive tasks vary with each employee. In many instances the student employee learns the procedures by observation of other student workers. There are no training classes for these workers.

Before the author began her preliminary observations of present dishroom procedures, the objectives of the study were discussed with the dishroom supervisor, dishroom foreman, and the student employees. These workers were requested and encouraged to offer suggestions for the improvement of dishroom procedures. These suggestions were used wherever possible. In this way cooperation and interest were obtained from these employees in making any changes in original procedures.

During the preliminary observations it was noted that no rubber collar was used on the openings provided for scrapping the food waste at the soiled dish table. Food waste was removed from the dishes either by using another dish as a scraper or by hitting the dish against the metal table. This resulted in chipped or broken dishes. Many cereal bowls were returned to be rewashed.

A large number of glass dishes were either cracked or broken in the process of going through the dish machine.

As a result of these observations it was felt that, of all the jobs in the dishwashing unit, the jobs of the workers at the soiled dish table required the most repetitive skill. Maximum speed and dexterity in this repetitive skill are necessary in order to properly scrap, stack, and rack the soiled dishes in their appropriate racks without chipping or breaking the china, especially during the peak periods when patrons are leaving the dining rooms.

In order to compare dishroom procedures used in the Home Economics Cafeteria with those used in other cafeterias, questionnaires were sent to 47 representative food service operations: 19 colleges, 6 hospitals and 22 industrial and commercial cafeterias, see Appendix, pages 35-39. In selecting the industrial and commercial cafeterias, the winners and honor award winners of the 1950 Institutions Magazine Food Service Contest were contacted.

An analysis of the questionnaire suggested few changes in procedures in the Home Economics Cafeteria, see Appendix, pages 40-49.

Observations were made in the dishrooms of the

Willard Straight Cafeteria and the Statler Club. In these dishrooms, the method of racking the flat dishes differed from the procedures used in the Home Economics Cafeteria. The operators picked up 2 dishes in each hand and racked these dishes edgewise between the dowels of the dish rack. Dishes were prewashed by means of a prerinse machine. In the Home Economics Cafeteria dishroom the operator picked up a stack of dinner plates, usually 7, with both hands. The operator used the thumb and index finger of each hand to guide the dishes into the racks. The remaining 3 fingers of each hand held the plates. The dish on the top of the stack was inserted first into the rack. The dishes in the rack were prewashed by means of a preflush hose before the racks were placed in the dish machine. This method of racking flat dishes was most satisfactory in producing clean dishes with the result that more dishes were placed in the racks at one time.

The sound film, Dishwashing Dividends,¹ was previewed. This is a film of dishwashing techniques by the machine method. Procedures, such as proper scrapping, prewashing, and air drying are well illustrated. In the opinion of the writer, too many of the scenes were "shot"

1. Produced by Economics Laboratory, Inc., Saint Paul 1, Minnesota.

at a distance too far away from the actual operation to be effective for training employees. For the purposes of this problem, slides and/or photographs seemed to be a better visual aid than motion pictures because they can be projected on the screen for any length of time. The trainees and the instructor can discuss the contents of the slide or photograph for as long as necessary. Also, photographs taken at the actual scene of operation are more meaningful to the trainees.

After observations of dishroom procedures used in the Home Economics Cafeteria, the Willard Straight Cafeteria, and the Statler Club, a preview of the film, Dishwashing Dividends, and an analysis of the replies from the questionnaire, it seemed desirable to change certain procedures in the Home Economics Cafeteria dishroom in order to produce clean tableware with the minimum of effort. These changes in the procedure follow.

Procedure for prewashing and racking cereal and soup bowls: Cereal and soup bowls were racked in a slanting, overlapping position between every 3 dowels in the open racks. The bowls were not prerinsed before being washed in the dish machine. It was necessary to rewash from 2.6 per cent to 28.3 per cent of these bowls, see Appendix, page 50 . The wide variation in the number of

bowls to be rewashed was dependent upon the kind of soup or cereal served and the length of time the bowls remained on the soiled dish table before they were racked and washed. This method of racking made it difficult for the sprays of wash water to reach the entire inner surface of the bowl.

Companies who manufacture dishwashing machines and detergents recommend racking soup and cereal bowls with the open side down in the open racks. This method was tried and, while it was possibly an improvement over the previous method, it was not entirely satisfactory as a number of cereal bowls had to be rewashed.

It was difficult to make a satisfactory comparison of time required to wash cereal bowls by these two methods. The primary difficulty was in the length of time the bowls remained on the soiled dish table before they were racked. If they remained approximately 1 hour, more bowls needed to be rewashed. For those that were washed immediately, racking open side down took only 174 seconds to obtain 90 clean bowls as compared with 299 seconds in the slanting, overlapping position, see Appendix, pages 51-52. Because of the number of variables in the experiment, no clear-cut picture can be obtained.

However, racking, open side down, was satisfactory for all soup bowls and cups except those used for French

onion soup. In this case, the bowls and cups were soaked in lukewarm, soapy water and then scrubbed with a vegetable brush before racking.

In the procedure which was found to be the most satisfactory for washing cereal bowls, leftover food was scrapped from the cereal bowls, and the bowls were placed on an aluminum tray. The tray of bowls was pushed along the soiled dish table to the preflush sink. Water was flushed into each bowl by means of the preflush hose. The operator used his hand to scrub the inner surface of each bowl. The bowls were then racked in a slanting, overlapping position between every 3 dowels in the open racks. This was a satisfactory method of racking prerinsed cereal and soup bowls. It eliminated the work of rewashing cereal and soup bowls.

Procedure for racking glass dishes: Glass dishes were originally racked between china fruit saucers and soup bowls in a slanting, overlapping position between every 2 dowels in the open racks. With this method, the glass dishes were cracked and chipped. When the glass dishes were racked either open side down or in separate rows in a slanting, overlapping position in the open racks, breakage and cracking were reduced.

Procedure for transporting empty glass racks from the soiled dish table to the soiled glass table: Empty glass racks from the north dining room were sent, by means of the trayveyor, to the soiled dish table. It was necessary to transport these racks to the soiled glass station, a distance of approximately 12 feet. In the original procedure, the operator at the soiled dish table slid the rack across the floor to the operator at the soiled glass table. This procedure caused the metal racks to become bent. In the new procedure, dollies were kept beneath the soiled dish table. The empty glass racks were placed on the dolly. The dolly was pushed to the operator at the soiled glass station.

Procedure for racking glasses: Glasses were previously racked by the following method: the operator picked up 2 glasses in his left hand; the glasses were inverted as they were picked up; the glasses were then transferred to the right hand and were placed in the glass rack. By this method, glasses hit against each other and chipped. In the new procedure, motions were saved and the chipping of glasses was reduced by racking the inverted glasses, one in each hand, into the glass rack.

Procedure for sorting and soaking breakfast silver:

At each meal, silver was sorted on shallow, aluminum trays at the clearing table in each dining room. The filled trays were sent to the dishroom by means of the tray-veyors. It was necessary to soak the breakfast silver in lukewarm, soapy water. The silver was then scrubbed with a stiff, bristled brush prior to racking. When the trays were lifted from the water, the tray tilted easily and some of the silver slipped into the sink. Spoon handles and knife blades became entangled in the fork tines and caused bending. The use of a four compartment perforated silver basket with handles for sorting and soaking the breakfast silver was an improvement over the procedure described. However, due to the limited storage space at the clearing tables in the dining rooms, this basket could not be used satisfactorily for the sorting of silver at the lunch and dinner meals.

Procedure used for scrapping leftover food from dishes: Originally the most frequently used method for scrapping food waste from dishes was by means of another dish. This method was unsatisfactory because the dishes chipped easily. Operators were instructed to use the side of the bare, left hand or a rubber plate scraper. The rubber scraper slowed up the worker and frequently

fell into the garbage can. However, operators may use either the side of the hand or the plate scraper as the tool for scrapping dishes.

Type of collar used on the garbage hole openings in the soiled dish table: At the beginning of this study no collar was used on the garbage hole openings in the soiled dish table. The use of a hard rubber collar was discontinued because the composition of the rubber was poor and caused marking of the dishes. However, if no collar was used, the table soon became messy and the operators were apt to hit the dishes against the stainless steel table to remove food waste. This caused the dishes to chip. A low wooden collar of birch was constructed and proved more satisfactory.

After the changes in procedures for scrapping and racking soiled dishes and glasses were decided upon, job descriptions were prepared, see Appendix, pages 69-97. These gave a detailed account of the duties of each operator.

A diagram of the dishroom was made to show the arrangement of equipment and the location of the operators. Job summaries describe the major activities of each of these operators, see pages 22-31.

Black and white photographs,² 4 x 5 inches were made of the most important dishroom activities. These were mounted on heavy cardboard, 7-1/8 x 7-3/16 inches, and labelled with appropriate legends.

A lesson plan for training operators in proper procedures for scrapping and racking soiled dishes and soiled glasses was prepared, see Appendix, pages 53-64.

2. Photographs taken by Department of Extension Teaching and Information, College of Agriculture.

RESULTS AND DISCUSSION

The tangible results of this project are three types of visual aids: the floor plan of the dishroom; the job summaries and job descriptions; and the series of photographs, in black and white, of certain dishroom procedures. The value of these instructional aids cannot be measured entirely by the opinions or impressions of any individual as he sees the photographs on the screen. The real results will be reflected in the improved performance of the student workers in the dishroom.

A total of 58 photographs were taken. These cover the major procedures employed in the dishroom of the Home Economics Cafeteria. Twenty-six of these photographs, with narrative script, were used in the training class, see Appendix, pages 54-62, for the narrative script. Titles were prepared for 32 of the photographs, see Appendix, pages 65-68, for the titles.

The floor plan, page 21, the job summaries, pages 22-31, the job descriptions, Appendix, pages 69-97, the lesson plan for the training class, Appendix, pages 53-64, and a few reproductions of the photographs, pages 19-20 have been included to better describe the results achieved.

Copies of the job summaries and job descriptions were

put in a notebook and placed in the dishroom.

Plate I shows a selected group of 6 photographs at the soiled dish and soiled glass stations. For narrative script which accompanies this series, see Appendix, pages 54-62.

Plate II shows certain procedures used at other stations in the dishroom. For titles to accompany this series, see Appendix, pages 66-68.

The photographs shown on Plates I and II and 4 additional photographs will be reproduced, enlarged to 11 x 13 inch size, framed, and titled. The photographs will be placed at the various stations in the dishroom.

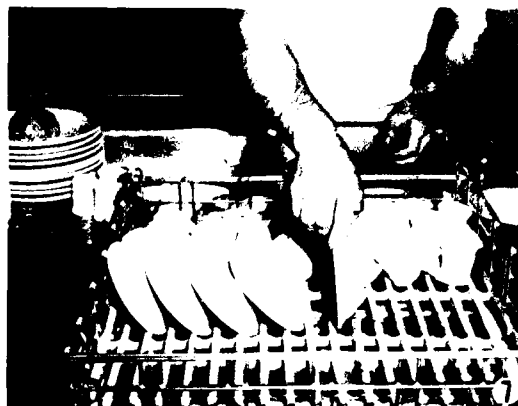
At the beginning of the summer session, a training class was held during working hours for the new and old student employees. The dishroom foreman also attended the class. Two of the visual aids, developed for this project were used, namely, the floor plan of the dishroom, and the photographs, with narrative script. The photographs were projected by means of an opaque projector onto a screen. In addition, the kinds of racks used at the soiled dish station were shown. The instructor identified the racks and the types of dishes placed in each rack. The oral quiz which was conducted after the showing of the photographs stimulated the interest of the trainees. They responded exceptionally well to the

questions. However, in presenting a visual aid in which skills are being taught, it is necessary for the trainees to engage in self-activity in order to learn the skill. The majority of the trainees worked at the dinner meal which followed the training class. This group of employees learned the skills quickly. Since the cafeteria was closed the following day, the group who had not engaged in self-activity immediately following the class were slower in learning the skills and needed more on-the-job coaching.

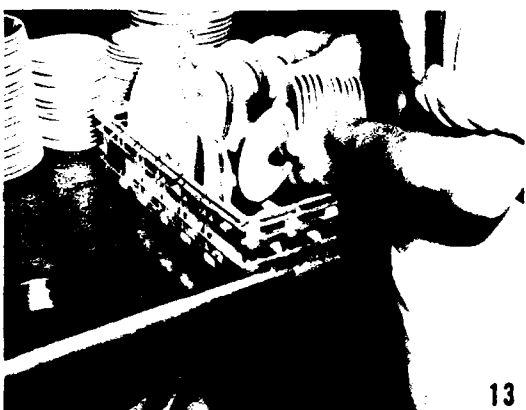
PLATE I



4



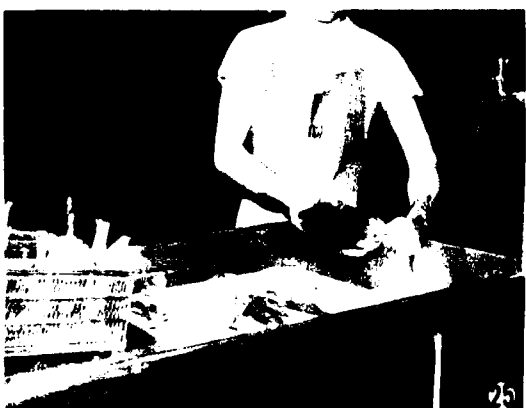
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13



14

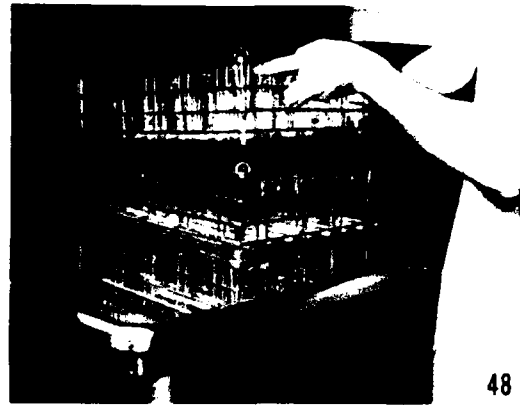
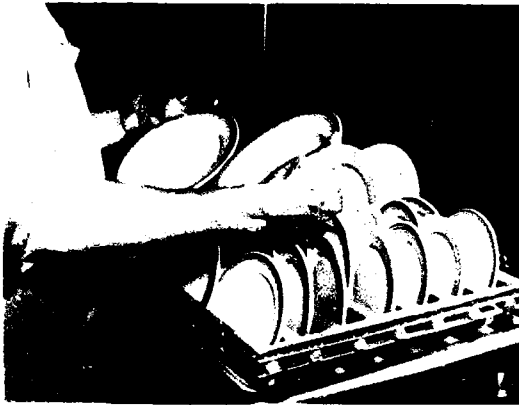


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26

PLATE II



48



50



Load dumb waiter with a variety of china, glasses, silver, and trays. Place the heaviest load on the left side of dumb waiter.

51



54

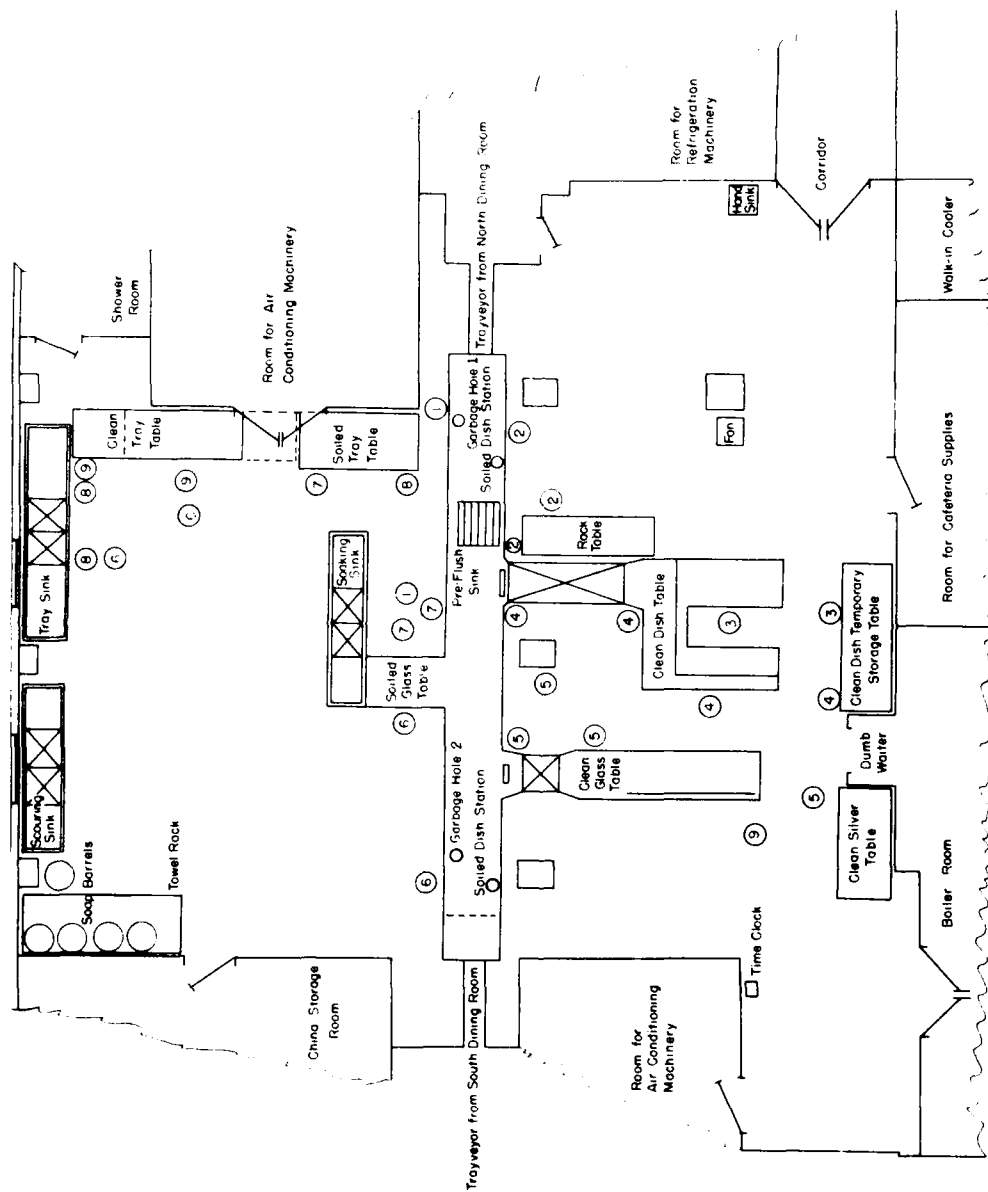


PLATE III DISHROOM LAYOUT WITH OPERATORS STATIONED FOR LUNCH AND DINNER MEALS
(Repeated numbers indicate the various points at which operators work)

LOCATIONS OF DISHROOM OPERATORS AT
LUNCH AND DINNER MEALS

- Dishroom Operator 1: Right side of north dining room
soiled dish table
- Dishroom Operator 2: Left side of north dining room
soiled dish table
- Dishroom Operator 3: U-shaped area of clean dish table
- Dishroom Operator 4: Left side of clean dish table
- Dishroom Operator 5: Circulates within the following areas:
dish machine, glass machine, clean
silver table, clean glass table,
left side of clean dish table
- Dishroom Operator 6: Right side of south dining room
soiled dish table
- Dishroom Operator 7: Soiled glass station, soaking sink,
or left end of soiled tray table
- Dishroom Operator 8: Tray sink
- Dishroom Operator 9: Clean tray table

JOB SUMMARIES OF DUTIES OF DISHROOM OPERATORS
FOR LUNCH AND DINNER MEALS

Dishroom Operator 1

Scraps soiled dishes; racks cups, soup bowls (other than bowls and cups used for French onion soup), creamers, fruit saucers, glass dishes, teapots with tops, sugar bowls with tops, and ash trays into open racks; stacks flat dishes, casserole dishes, plastic salad bowls, custard cups; delivers trays of silver and glasses to Dishroom Operator 7; places empty glass racks on dollie and pushes to Dishroom Operator 7; works under direct supervision of Dishroom Foreman.

Dishroom Operator 2

Racks flat dishes (dinner plates, dessert plates, bread and butter plates, saucers) and aluminum trays into cross dowel racks; pushes filled cross dowel racks to pre-flush sink and flushes flat dishes with pre-flush hose; pushes cross dowel racks into entrance of dish machine; pushes filled open racks and silver racks into entrance of dish machine; keeps soiled dish table supplied with empty cross dowel and open racks; works under direct supervision of Dishroom Foreman.

Dishroom Operator 3

Guides racks of dishes as they emerge from rinse compartment of dish machine; pushes open racks to left side of clean dish table and pushes cross dowel racks to right side of clean dish table; inspects and/or rejects clean flat dishes and aluminum trays from cross dowel racks; places flat dishes and aluminum trays in designated temporary storage areas; places empty open and cross dowel racks on rack table; helps load china, silverware, glasses, bakelike trays and aluminum trays on dumb waiter; works under direct supervision of Dishroom Foreman.

Dishroom Operator 4

Inspects and/or rejects clean dishes from open racks; places clean dishes in designated temporary storage areas; pushes empty open racks to Dishroom Operator 3; sends silver racks through dish machine for a second washing; rinses racks of silver and racks of plastic salad bowls with hose located at end of dish machine; helps load china, silverware, glasses, bakelite trays and aluminum trays on dumb waiter; works under direct supervision of Dishroom Foreman.

Dishroom Operator 5 (Foreman)

In charge of assigning dishroom operators to their

stations; responsible for maintaining order in the dishroom; trains and checks constantly to see that correct dishroom procedures are being followed; answers intercom calls from cafeteria serving counter and sees that dishroom operation is providing adequate supplies of dishes, glasses, silver and trays to cafeteria serving counter; responsible for proper operation of dish machine and glass machine; removes racks from glass machine, removes clean silver from silver racks using a clean towel to handle fork tines, bowls of spoons, and knife blades; stores clean silver in silver boxes; helps load clean silverware, glasses, china, bakelite trays and aluminum trays on dumb waiter; unloads dumb waiter of dirty dishes; empty silver and cup boxes, and milk crates and places in designated storage areas. NOTE: THESE DUTIES MAY BE COMBINED WITH DUTIES OF DISHROOM OPERATOR 4 IF MEAL LOAD IS NOT HEAVY.

Dishroom Operator 6

Scraps soiled dishes and stacks in orderly piles of like size and shape on appropriate aluminum trays; pushes these trays to Dishroom Operator 7 who then pushes these trays to Dishroom Operator 1; delivers empty milk crate and empty glass racks and trays of soiled silver to designated areas; assists Dishroom Operator 7, 8, and/or 9,

as time permits; works under direct supervision of Dishroom Foreman.

Dishroom Operator 7

Washes by hand with appropriate brush the following dishes: casserole dishes, custard cups, plastic salad bowls, soup bowls and cups for French onion soup; racks glasses and plastic salad bowls in appropriate racks; receives trays of soiled dishes from Dishroom Operator 6 and pushes these trays to Dishroom Operator 1; receives trays of empty milk bottles from Dishroom Operator 6 and carries these trays to soiled tray table; racks milk bottles in milk crates placing filled crates behind the soaking sink; racks silver in silver racks; works under direct supervision of Dishroom Foreman.

Dishroom Operator 8

Transports soiled bakelite trays from soiled tray table and south dining room soiled dish station to tray sink by means of portable truck; washes trays by hand using stiff, bristled brush; places trays into sink of hot, soapy water and then into sink of hot, rinse water; stacks washed trays on drainboard in orderly manner; works under direct supervision of Dishroom Foreman.

Dishroom Operator 9

Removes washed bakelite trays from drainboard; wipes trays by hand; loads trays onto portable trucks; pushes truck load of trays to dumb waiter; works under direct supervision of Dishroom Foreman.

LOCATIONS OF DISHROOM OPERATORS AT BREAKFAST MEAL

Dishroom Operator 1: Left side of north dining room
soiled dish table

Dishroom Operator 2: Circulates within the following work
areas: clean dish table, clean
dish temporary storage table, dish
machine, glass machine, clean glass
table, clean silver table

Dishroom Operator 2: Circulates within the following work
areas: right side of north dining
room soiled dish table, soiled glass
table, soaking sink, soiled and
clean tray table, tray sink

Locations for extra dishroom operators:

1. Clean tray table, or
2. Tray washing sink, or
3. Clean silver table, or
4. Clean dish table, or
5. Clean glass table

JOB SUMMARIES OF DUTIES OF DISHROOM OPERATORS
FOR BREAKFAST MEAL

Dishroom Operator 1

Scraps soiled dishes; racks cups, creamers, fruit saucers, glass dishes, teapots with tops, sugar bowls with tops, and ash trays into open racks; stacks flat dishes and egg dishes in orderly piles of like size and shape; places cereal bowls on aluminum trays and pre-washes with preflush hose; racks flat dishes and aluminum trays in cross dowel racks; inserts racks into dish machine; keeps soiled dish table supplied with empty cross dowel and open racks from rack table; answers calls from intercom box; works under supervision of Dishroom Supervisor.

Dishroom Operator 2

Inspects and/or rejects clean dishes and aluminum trays from open and cross dowel racks; places china to be rewashed and stained china in designated areas; sends racks of silver through dish machine for a second washing; rinses racks of silver with hose located at end of dish machine; removes silver from racks using a clean towel to handle fork tines, bowls of spoons, and knife blades;

places clean silver in boxes; responsible for proper operation of dish machine and glass machine; inserts and removes glasses from glass machine; loads clean silverware, glassware, china, bakelite trays, and aluminum trays on dumb waiter; unloads dumb waiter of dirty dishes, empty silver and cup boxes, and milk crates and places in designated storage areas; places empty open and cross dowel racks on rack table; answers intercom calls from cafeteria serving counter; works under supervision of Dishroom Supervisor.

Dishroom Operator 3

Assists Operator 1 during rush periods; carries trays of soiled silver and egg dishes to soaking sink; carries trays of soiled glasses and empty glass racks to soiled glass station; carries soiled trays and trays of empty milk bottles to soiled tray table; scrubs egg dishes and returns to Dishroom Operator 1; scrubs silver and racks this silver into silver racks placed on drainboard of soaking sink; places milk bottles in milk crates; stacks filled milk crates behind soaking sink; transports soiled bakelite trays from soiled tray table to tray washing sink by means of portable truck; washes trays by hand using stiff, bristled brush; places trays into sink of hot, soapy water and then into sink of hot, rinse water;

stacks washed trays on drainboard in orderly manner;
wipes trays by hand; loads trays onto portable truck;
pushes truck load of trays to dumb waiter; racks glasses
into glass racks; works under supervision of Dishroom
Supervisor.

CONCLUSIONS

Three types of visual aids for training student employees in certain dishroom procedures were produced in the Department of Institution Management. The photographs illustrate major procedures used in the dishroom; the floor plan shows the location and names of the stations as well as positions of the operators at the lunch and dinner meals. A notebook containing the job summaries and job descriptions has been placed in the dishroom and should prove helpful, especially to the new employees, in learning the procedures used at the various stations.

The training aids have been used in only one training class to date. They did prove helpful in teaching the employees the repetitive skills used at the soiled dish and soiled glass stations.

In using the photographs as a training aid, it is well to remember that new employees will probably learn the procedures more readily than the old employees. The photographs will help in re-training the old employees. However, it will take time for the old employees to learn new procedures. The training instructor must be patient and understanding.

In developing instructional aids for training employees, evaluation might include the relative worth of photographs versus slides; strip film versus the movie; sound film versus the discussion narrative. For this particular project, it was felt that the photographs would be more flexible and less expensive than the slides, strip film or movie.

It is not unlikely that these photographs will find uses beyond the training classes for which they were produced. It is contemplated that certain of the photographs will be used in teaching classes in institution management, and that others will be used in extension teaching.

APPENDIX

ELIZABETH LEE VINCENT
Dean of the College
CAROLINE MORTON
Assistant to the Dean

ESTHER STOCKS
Secretary of the College
and
Placement Secretary

February 22, 1951

Dear

A preliminary study of sorting, stacking, and racking dishes in cafeterias is being undertaken to establish simplified procedures of racking and sorting dishes. We hope to develop a visual aid which will prove helpful in teaching dishroom employees how to improve their skill in these repetitive procedures. We hope you will be interested to cooperate with us. We want you to know that we fully appreciate the time you will spend in answering these questions.

May we ask that you give careful attention to all parts of the questions especially in those instances where your set-up falls in a category other (specify) than those listed. This is particularly important material. In those set-ups where you have more than one dishwashing unit, would you kindly answer our questionnaire by giving us information about your principle dishwashing unit?

Upon completion of this study we will be happy to share our findings with you.

Very sincerely yours,

Katharine W. Harris
Head, Department of
Institution Management

QUESTIONNAIRE

Name of institution: _____

Date: _____

Name of person answering questionnaire: _____

1. Type of clientele:

students _____
patients _____
staff _____
employees _____
other (specify) _____

2. (a) Approximate number
cafeteria at large _____
(b) Length of serving
largest meal _____
from _____ to _____

3. Relationship of dishwashing unit to
dining room:

adjacent _____
same floor but not adjacent _____
different floor _____
other (specify) _____

4. Before reaching dishroom:

(a) dishes sorted _____
(b) glasses sorted _____
(c) silverware sorted _____
(d) dishes stacked _____
(e) trays stripped of:
(1) paper (napkins, straws, dishes) _____
(2) bottles _____
(f) trays stacked _____

5. Dishes transported to dishroom by
means of:

conveyor belt _____
trayveyor _____
dumb waiter _____
elevator _____
trucks _____
bus boys _____
other (specify) _____

6. Dishes scraped by _____
bare hand _____
gloved hand _____
plate scraper _____
stiff brush _____
another dish _____
other (specify) _____

7. Dishes pre-rinsed by means of:

pre-rinse machine _____
high pressure hose after
racking _____
soaked and then racked:
(a) egg and cereal dishes _____
(b) casserole dishes _____
(c) all dishes _____
(d) silverware _____
(e) other (specify) _____

8. Type of dishwasher use
conveyor belt type _____
rack type _____
other (specify) _____

9. Glasses washed by means
glasswasher _____
same machine as dishes _____
a different machine _____
portable glass washer _____
other (specify) _____

other (specify) _____

QUESTIONNAIRE

36

Date:

ring questionnaire:

se:

2. (a) Approximate number served in this cafeteria at largest meal _____
- (b) Length of serving period for largest meal _____ from _____ to _____

dishwashing unit to

4. Before reaching dishroom:

not adjacent _____

	Yes	No
(a) dishes sorted _____		
(b) glasses sorted _____		
(c) silverware sorted _____		
(d) dishes stacked _____		
(e) trays stripped of:		
(1) paper (napkins, straws, dishes) _____		
(2) bottles _____		
(f) trays stacked _____		

ed to dishroom by

6. Dishes scraped by means of:

bare hand _____
 gloved hand _____
 plate scraper _____
 stiff brush _____
 another dish _____
 other (specify) _____

d by means of:

8. Type of dishwasher used:

line _____
hose after _____

conveyor belt type _____
 rack type _____
 other (specify) _____

n racked:

9. Glasses washed by means of:

cereal dishes _____
 e dishes _____
 es _____
 re _____
 pecify) _____

glasswasher _____
 same machine as dishes _____
 a different machine _____
 portable glass washer _____
 other (specify) _____

10. If bakelite trays are used, they are washed:

in dish machine _____
by hand _____
other (specify) _____

12. Total number employees at soiled dish station during largest meal

number assigned to sorting, scrap-
ping and stacking _____
number assigned to racking _____

13. Status of employees working at soiled dish station:

part time _____
full time _____
other (specify) _____

11. Silver:

(a) Washed by means of:
silver washer
same machine as dish
other (specify)

(b) Washed in:
compartment silver re
flat racks
perforated cylinders
other (specify)

(c) Dried by:
air _____
towels _____
other (specify) _____

14. Dimensions of soiled
length _____ ft. width _____

15. (a) Are visual aids used in training dishroom employees? Yes _____ No _____
(b) If used, please list below. Check whether:

[illegible]

LIST OF CAFETERIAS CONTACTED IN CONNECTION WITH COMPILATION
OF PERTINENT MATERIAL ON DISHWASHING AND THE USE OF
AUDIO-VISUAL AIDS

I. Colleges

Mrs. Virginia Apelgren,
Cafeteria Manager
University of Miami
Coral Gables, Florida

Director of Food Service
Women's League
University of Michigan
Ann Arbor, Michigan

Miss Alta Atkinson
Teachers' College Cafeteria
W. 120th Street
New York, N. Y.

Mrs. Evelyn Drake
Student Union
Michigan State College
East Lansing, Michigan

Miss Esther A. Atkinson,
Director of Food Service
Pennsylvania State College
State College, Pa.

Mr. George Fauerbach,
Food Service Director
City College of New York
New York, N.Y.

Miss Grace Augustine,
Director of Institution
Management
Iowa State College
Ames, Iowa

Miss Virginia Harger
Department of Institution
Management
Ohio State University
Columbus, Ohio

Miss Mildred Baker,
Director of West Dining Room
Pennsylvania State College
State College, Pa.

Miss Sylvia Hartt
Department of Institution
Management
Purdue University
West Lafayette, Indiana

Miss Mildred Bonnell
Department of Institution
Management
University of Washington
Seattle, Washington

Miss Elizabeth Hurley
Cutler Union
University of Rochester
Rochester, N. Y.

Mrs. Elsie B. Bush, Dietitian
University of Wyoming
Laramie, Wyoming

Miss Florence Pope,
Director of Residence Halls
and Commons
Cloister Club Cafeteria
University of Chicago
Chicago, Illinois

Director of Food Service
Purdue Memorial Union
Purdue University
West Lafayette, Indiana

Miss Ursula Praeter,
Director of Food Service
Slocum Hall
Syracuse University
Syracuse, N. Y.

Miss Mary Robinson
Todd Union
University of Rochester
Rochester, N. Y.

Miss Mary Smull
Department of Institution
Management
Kansas State College
Manhattan, Kansas

Mrs. Bessie Brooks West,
Director of Food Service
Department of Institution
Management
Kansas State College
Manhattan, Kansas

II. Hospitals

Major Elizabeth Carlross, WMSC
Hospital Food Service
Supervisor
Fitzsimons Army Hospital
Denver, Colorado

Miss Isabel Foster
Dietary Department
University Hospitals
Ann Arbor, Michigan

Miss Bernice Hopkins,
Director of Dietary Department
Vanderbilt Hospital
Nashville, Tennessee

Miss Margaret King,
Director of Dietetics
Henry Ford Hospital
Detroit, Michigan

Major Hilda Lovett, WMSC
Hospital Food Service
Supervisor
Walter Reed Army Hospital
Washington 12, D. C.

Miss Louise Roderick
Dietary Department
Strong Memorial Hospital
Rochester, N. Y.

III. Industrial and Commercial

Miss Phyllis A. Boppel,
Manager
Eaton Manufacturing Company
Heater Division Cafeteria
Cleveland, Ohio

Mrs. Theresa Boswell,
Manager
Golden State Mutual Life
Insurance Company Cafeteria
Los Angeles, California

Mr. Leo Brown, Manager
The Famous Barr Company Ware-
house Employees Cafeteria
St. Louis, Mo.

Miss Rachel Burmaster
The Paragon Lunch
Kappers Building
Pittsburgh, Pa.

Miss Catherine Burton
Behr Manning Corporation
Troy, N. Y.

Mr. Clifford E. Clinton
Clifton's Cafeteria
Los Angeles, Calif.

Miss Marie Dutch
Office Cafeteria
Eastman Kodak Company
Rochester, N. Y.

Miss Marjorie Flint
Stewards' Department
Statler Hotel
Buffalo, N. Y.

Mrs. Grace Rust Frick
Russett Cafeteria
Cleveland, Ohio

Mr. E. W. Graberman
Head of Commissary
National Cash Register Company
Cafeteria
Dayton, Ohio

Mr. Newton Holland
Holland's Cafeteria
Rochester, Minnesota

Miss May Hoover,
Director of Cafeterias
Government Services Inc.
Washington, D. C.

Mr. L. E. Johnson
Blue Boar Cafeteria
Fourth Street
Louisville, Ky.

Mrs. Opal Bowers Johnston
Food Service Department
General Electric
Schenectady, N. Y.

Mrs. Anne Kuzmich,
Manager
Monsanto Chemical Company
Cafeteria
St. Louis, Mos.

Mr. Charles N. Ladd,
Manager
John Hancock Mutual Life
Insurance Company Cafeteria
Boston, Mass.

Mr. Louis Leverone, President
Nationwide Food Service
Pacific Press Employees
Cafeteria
Los Angeles, California

Mr. Roy Mason
Fuller Brush Cafeteria
Hartford, Conn.

Mr. N. L. Pithey
Western Electric Company
Cafeteria
Los Angeles, California

Miss Ann Reinhold, Assist-
ant Dietitian
Y.W.C.A. Cafeteria
Hartford, Conn.

Miss Clarice M. Thrush,
Manager
Ohio Bell Telephone Company
Employees Cafeteria
Cleveland, Ohio

ANALYSIS OF THE QUESTIONNAIRE

Questionnaires were sent to 47 representative food service operations: 19 colleges, 6 hospitals, and 22 industrial and commercial cafeterias. Replies were received from 37 of these food service operations: 17 colleges, 5 hospitals, and 15 industrial and commercial cafeterias. Data from these questionnaires have been summarized in Tables 1 - 9.

TABLE I
Visual Aids Used by 37 Cafeterias
in Training Dishroom Employees*

	Number of Cafeterias			All
	In Colleges	In Hospitals	In Industrial and Commercial	
Types of visual aids used:				
Job break-downs	0	0	1	1
Job descriptions	0	0	1	1
Job schedules	0	0	1	1
Notebook on procedures	0	1	0	1
Posters (Hobart)	2	1	1	4
Slides	0	0	1	1
Sound films:				
Army training films (3)	0	2	0	2
<u>Dishwashing</u> <u>Dividends</u>	1	0	2	3
<u>Eating Out</u>	1	0	0	1
Other films shown by health department in training schools	1	0	1	2
Number of cafeterias using visual aids	4	1	4	9

*Majority of cafeterias used a combination of full-time and part-time employees in dishroom.

TABLE II

Approximate Number Served at Largest Meal and
Length of Serving Period for 37 Cafeterias

	Number of Cafeterias			All
	In Colleges	In Hospitals	In Industrial and Commercial	
Patrons:				
Less than 500	6	1	4	11
500 - 999	4	4	2	10
1000 - 1499	3	0	1	4
1500 - 1999	2	0	2	4
2000 - 2499	1	0	2	3
2500 - 2999	1	0	0	1
3000 - 5000	0	0	2	2
Over 5000	0	0	1	1
No answer to question	0	0	1	1
Length of serving Period:				
Less than 1 hour	2	0	1	3
1 to 2 hours	10	3	7	20
2-1/4 to 3 hours	3	2	5	10
3-1/4 to 3-1/2 hours	2	0	2	4

TABLE III

Relationship of Dishwashing Unit to Dining
Room and Procedures Used for Partially
Clearing Trays before Trays Reach
Dishroom for 37 Cafeterias

	Number of Cafeterias			All
	In Colleges	In Hospitals	In Industrial and Commercial	
Relationship of dishwashing unit to dining room				
Adjacent	10	4	10	24
Same floor but not adjacent	2	0	1	3
Different floor	3	1	4	8
Part adjacent; part not adjacent	1	0	0	1
Adjacent for 2 meals; different floor for evening meal	1	0	0	1
Procedures for partially cleaning trays				
Dishes sorted	11	1	8	20
Glasses sorted	11	1	7	19
Silverware sorted	7	1	5	13
Dishes stacked	10	1	5	16
Trays stripped of:				
(1) paper napkins, straws, dishes	10	1	8	19
(2) bottles	10	1	6	17

TABLE IV
Procedures Used by 37 Cafeterias
to Transport Dishes to Dishroom

Procedures used to transport dishes to dishroom	Number of Cafeterias			All
	In Colleges	In Hospitals	In Industrial and Commercial	
Conveyor belt	2	0	0	2
Trayveyor	2	0	1	3
Dumb Waiter	0	1	0	1
Total mechanical	4	1	1	6
Patrons	5	1	2	8
Bus boys or girls	2	2	2	6
Waitresses	1	0	0	1
Bus boys and ambulatory patients	0	1	0	1
Total people	8	4	4	16
Patrons and trucks	1	0	2	3
Bus boys, trucks, and elevator	1	0	0	1
Bus boys, or girls and trucks	2	0	4	6
Bus boys and conveyor belts	1	0	1	2
Patrons and escalator	0	0	1	1
Floor attendants and subveyor	0	1	1	2
Patrons and conveyor belt	0	0	1	1
Total machines and people	5	1	10	16

TABLE V

Procedures Used by 37 Cafeterias
to Scrap Food Waste from Dishes

Procedures for scrapping waste food from dishes	Number of Cafeterias			All
	In Colleges	In Hospitals	In Industrial and Commercial	
Bare hand	0	1	2	3
Gloved hand	1	0	0	1
Plate scraper	8	2	3	13
Stiff brush	1	0	4	5
Stiff brush and pre- rinse sprayer	1	0	0	1
Plate scraper and stiff brush	1	0	1	2
Bare hand and pre- rinse sprayer	1	0	0	1
Bare hand and plate scraper	1	1	1	3
Bare hand and stiff brush	1	0	0	1
Bare hand, knife and/or fork	1	0	0	1
Paper napkin or knife	1	0	0	1
Bare hand and thumping against rubber collar	0	1	1	2
Paper napkin	0	0	1	1
Bare hand, stiff brush, another dish or thump- ing against rubber collar	0	0	1	1
Gloved hand and stiff brush	0	0	1	1

TABLE VI

Procedures Used to Prerinse Dishes and Types
of Tableware Soaked before Racking for 37 Cafeterias

	<u>Number of Cafeterias</u>			<u>All</u>
	<u>In</u>	<u>In</u>	<u>In</u>	
	<u>Colleges</u>	<u>Hospitals</u>	<u>Industrial and Commercial</u>	
<hr/>				
Procedures for prerinsing dishes:				
Prerinse machine	4	1	7	12
High pressure hose after racking	8	0	4	12
Types of tableware soaked before racking:				
Egg and cereal dishes	11	3	3	17
Casserole dishes	7	1	6	14
All dishes	2	1	2	5
Silverware	6	2	4	12
Plates used for corn and starchy items	0	1	0	1
Egg dishes only	0	0	1	1
All dishes from night meal	0	0	1	1
Silverware soaked in dining room on truck	0	0	1	1

TABLE VII
 Procedures Used by 37 Cafeterias
 for Washing Glasses

Procedures for washing glasses	Number of Cafeterias			All
	In Colleges	In Hospitals	In Industrial and Commercial	
Glasswasher	7	2	4	13
Same machine as dishes	7	0	5	12
A different machine	1	1	2	4
Portable glass washer; then same machine as dishes	0	0	2	2
No glassware used	1	0	1	2
Glasswasher or same machine as dishes	1	0	0	1
Same machine as dishes after this machine is cleaned and fresh water added	0	1	1	2
By hand	0	1	0	1

TABLE VIII

Procedures Used to Wash and Dry
Silverware for 37 Cafeterias

	Number of Cafeterias			All
	In Colleges	In Hospitals	In Industrial and Commercial	
Types of machines:				
Silver washer	1	1	3	5
Same machine as dishes	15	2	11	28
Glasswasher first; then silverwasher	1	0	0	1
Dish machine first; then silverwasher	0	1	0	1
Glasswasher	0	1	0	1
In baskets and forced water under pressure	0	0	1	1
Types of equipment:				
Compartment silver rack	0	0	4	4
Flat racks	14	2	.	23
Perforated cylinders	2	2	3	7
Flat racks in glasswasher; perforated cylinders in silver washer	1	0	0	1
Baskets	0	0	1	1
No answer to question	0	1	0	1
Procedures for drying silver:				
Air dried	5	4	4	13
Towels	11	0	8	19
Disinfectant solution; then air dried	0	0	1	1
Dipped in Silva Dry; then air dried	0	0	2	2
No answer to question	1	1	0	2

TABLE IX

Procedures used to Wash Bakelite
Trays for 37 Cafeterias

Procedures for Washing Bakelite Trays	Number of Cafeterias			All
	In Colleges	In Hospitals	In Industrial and Commercial	
In dish machine	11	4	9	24
By hand	2	0	3	5
In dish machine; dried by hand	0	0	1	1
By hand daily; in dish machine once monthly	0	0	1	1
No bakelite trays used	3	0	1	4
No answer to question	1	1	0	2

TABLE X

Observations on Unrinsed Cereal and Soup Bowls
Racked and Washed in a Slanting, Overlapping Position

Kind of food used in bowls	Number of bowls washed	Number of bowls dirty after washing	Per Cent of bowls dirty after washing
Cream oyster soup	60	11	18.3
Wheatworth cereal	99	28	28.3
Spanish bean soup	38	1	2.6
Farina cereal	122	20	16.4
Ralston cereal	94	19	20.2
Rolled oats cereal	96	14	14.6
Rolled oats, ralston, and farina cereals	135	15	11.1

TABLE XI

Time Required to Rack 90 Unrinsed Cereal Bowls and Rewash
Dirty Bowls When Racked in a Slanting, Overlapping Position

Elements	Bowls* Used for Wheatworth	Bowls* Used for Pettijohns	Bowls* Used for Farina
	Seconds	Seconds	Seconds
Original racking of bowls; push into machine opening	82.4	102.0	142.4
Number bowls to be rewashed	(26) [†]	(10) [†]	(20) [‡]
Time necessary for rewashing bowls: Inspect bowls, place on reject shelf	26.0	10.0	20.0
Take bowls from reject shelf to soaking sink	29.0	9.5	7.2
Lift bowls from sink	5.0	6.0	5.0
Scrub bowls with brush	113.0	40.0	34.0
Take bowls to soiled dish table	5.0	5.0	9.0
Rerack bowls; push into machine opening	23.7	12.0	31.5
Total time to obtain 90 clean bowls	284.1	184.5	299.1

* 5 replications

+ 18 bowls per rack

† Stood approximately 1 hour before racking

‡ Racked immediately

TABLE XII

Time Required to Rack 90 Unrinsed Cereal Bowls and Rewash
Dirty Bowls When Racked Open Side Down

Elements	Bowls* Used for Maltex	Bowls* Used for Pettijohns	Bowls* Used for Maltex
	Seconds	Seconds	Seconds
Original racking of bowls; push into machine opening	75.3	78.7	62.1
Number bowls to be rewashed	(36) [†]	(16) [†]	(21) [§]
Time necessary for rewashing bowls:			
Inspect bowls; place on reject shelf	36.0	20.8	21.0
Take bowls from reject shelf to soaking sink	14.5	10.0	9.0
Lift bowls from sink	30.0	20.0	5.0
Scrub bowls with brush	98.0	40.0	53.0
Take bowls to soiled dish table	9.0	8.0	5.0
Rerack bowls; push into machine opening	30.0	14.1	13.6
Total time to obtain 90 clean bowls	292.3	191.6	173.7

* 10 replications

† 9 bowls per rack

‡ Stood approximately 1 hour before racking

§ Racked immediately

LESSON PLAN FOR TRAINING CLASS ON PROCEDURES
AT THE SOILED DISH AND SOILED GLASS STATIONS

A. Explain purpose of meeting:

We are having this training class in order to explain the organization and plan of the dishroom, the kinds of racks used at the soiled dish table, and essential procedures to use at the soiled dish and soiled glass stations. If you learn the right way to do these jobs, you will find that you will get clean dishes with less work, and that fewer dishes will need rewashing.

In any cafeteria or restaurant which serves the public, it is most important to have clean, sanitary dishes, glassware, silverware, and trays for the protection of the patrons and because clean dishes give the feeling that the kitchen is also clean. In this way we satisfy our patrons. We know that we are doing a good job of washing the tableware properly. Also, if we learn how to handle china, silverware, glassware, and trays the right way at the soiled dish and soiled glass stations, we will be protecting the department for which we work against loss, breakage, or chipping of china, silverware, glasses, and trays.

We are sure that you, as new and old employees,

wish to learn good work habits, to develop high standards of sanitation, and safety, and to learn the easiest and most satisfactory way to do a good job.

- B. Show and explain an open and a cross dowel rack. Summarize the kinds of dishes racked in each type of rack.
- C. Show the class the floor plan of the dishroom. Explain the names and locations of each station.
- D. Tell the class that, after the showing of the photographs, there will be an oral quizz.
- E. Show the photographs. (The time required to show the photographs and to give the script is approximately 20 minutes.)
- F. Conduct the oral quizz.

The script, numbered to correspond with the photographs, follows.

"DISHROOM PROCEDURES"

These pictures were made in the Home Economics Cafeteria dishroom. They show essential procedures to use in order to obtain clean dishes.

1. Operator 1 stands at right side of the soiled dish table. He receives trays, delivered by the tray-veyor, from north dining room. He scraps leftover

food from all dishes; stacks flat dishes; and racks all other dishes into open racks. Operator 2 stands at left side of this table. He racks flat dishes into cross dowel racks with the preflush hose; pushes both crossdowel and open racks into the dish machine opening; and keeps the soiled dish table supplied with empty cross dowel and open racks from the rack table.

2. Operator at south dining room soiled dish station stands at right side of soiled dish table. Soiled dishes from the south dining room are scrapped and stacked on aluminum trays. These trays are pushed to operator 1.
3. Operator 1 scraps leftover food from a cup and a soup bowl by tilting these dishes over garbage hole 1. The reason for emptying the leftover contents into the garbage hole opening is to keep the soiled dish table as clean as possible. If the leftover contents were emptied on the table, the table would soon become quite messy.
4. Operator 1 uses the side of his left bare hand to scrap leftover food from a dinner plate and other dishes. The side of the left bare hand is the fastest tool for scrapping leftover food from dishes. However, if you prefer, you may use a plate scraper

as your tool for scrapping the leftover food from the dishes. If you use a scraper, be careful and do not let the plate scraper fall into the garbage can. The reason we do not thump the dishes against the side of the wooden collar or scrap leftover food from the dishes with another dish is to prevent chipping and cracking of dishes.

5. Cups, creamers, and soup bowls are scrapped and racked immediately, open side down, into open racks. Soup bowls which have not been prewashed before racking will not come out clean if they are not racked this way. Glass dishes are racked open side down too. The reason for this is that if they are racked in a slanting, overlapping position between china fruit saucers and china soup bowls, the weight of the china will break the glass dish.
6. Teapots with tops, creamers, sugar bowls with tops, ash trays, and fruit saucers are scrapped and racked into open racks.
7. Fruit saucers are racked in a slanting, overlapping position between every 2 dowels in the open racks. Be careful to rack these dishes between every 2 dowels. If you do not do this, dishes will not stay in straight rows, and it will take longer to rack them.

When these dishes are racked between every 2 dowels, they will come out clean the first time they are washed because water from the sprays in the wash compartment of the dish machine will hit all of the inner surface of the fruit saucer.

8. Empty glass racks are placed on dollies and pushed to operator at the soiled glass station. This is the most satisfactory method of transporting glass racks to the soiled glass station. The reason we do not slide the racks across the floor is that this procedure causes the racks to become bent.
9. Operator 1 places a stack of soiled trays on the soiled tray table. Trays of empty milk bottles are placed on the opposite end of the table.
10. Operator 1 receives a tray of soiled glasses from the trayveyor. He either takes this tray to the operator at the soiled glass station or places the tray on the soiled tray table. If Operator 1 is extremely busy, he may place trays of soiled glasses and trays of silver on the end of this table where the operator from the soiled glass station may pick them up.
11. Operator 2 racks a dinner plate edge-wise between every cross dowel. The row of dinner plates is racked in the right side of the rack.

12. The cross dowel rack load: 1 row dinner plates and 2 rows saucers, or we may rack one row of dinner plates and 2 rows of dessert plates. The reason for racking flat dishes in the cross dowel rack in this way is to keep the cafeteria serving counter supplied with a variety of clean dishes at all times, or
13. The cross dowel rack load: 1 row dinner plates and 3 rows bread and butter plates. This shows another way in which cross dowel racks may be filled with a variety of dishes.
14. Operator 2 flushes filled cross dowel racks of flat dishes with preflush hose. The operator first moves the hose from the front of the rack to the back of the rack. This prewashes the tops of the dishes. The operator then washes the bottoms of the dishes by moving the hose from the back of the rack to the front of the rack. When the dishes are prewashed like this, all of the flat dishes will come out of the dish machine clean. This means that they will not have to be rewashed.
15. Operator 2 turns the filled cross dowel rack at right angles into entrance of dish machine. The narrow end of the dish rack fits into the opening of the dish machine. In order to insert the dish rack into the dish machine opening, turn the rack at

right angles when the rack reaches the corner of the soiled dish table.

16. Operator 2 pushes the filled cross dowel rack into entrance of dish machine.
17. Operator 2 pushes the filled open rack along soiled dish table to entrance of dish machine. Dishes in open racks are not preflushed.
18. An operator cleans the soiled dish table after each meal. He first uses a squeegee to scrap spilled food and liquid on the table into preflush sink.

A squeegee is a gadget with a gum rubber blade. You will find it a very useful tool to use in removing spilled food and liquid from the table.

19. The operator finishes cleaning the table with soapy water and a stiff bristled brush. The rinsing water should be directed to the preflush sink.

The reason the water is directed to the preflush sink is to prevent as much liquid as possible from going into the garbage holes. This wets the garbage in the cans, and we wish to prevent this from occurring.

20. The operator at the soiled glass station uses a vegetable brush to wash plastic salad bowls and to scrub casserole dishes and custard cups.

Plastic salad bowls are then racked into cross dowel racks at this station. The filled cross dowel

rack is given to the operator who stands at the left side of the clean dish table. This operator flushes the bowls with the hose located at the end of the dish machine. Plastic salad bowls are not sent through the dish machine because the finish of the bowls is discolored by the detergent and temperature in the dish machine. The bowls are light in weight and the force of the sprays of wash water cause the bowls to blow out of the racks. The prerinsed casserole dishes and custard cups are taken to Operator 1 who racks these dishes, open side down, into the open racks.

21. The operator at the soiled glass station racks inverted glasses, one in each hand, into glass rack. You will find that this is an easy method to rack glasses and the glasses will not chip when racked by this method.
22. Operator at soiled glass station racks silver, using both hands, into silver racks. Spoons are placed in one end of rack; forks in other end of rack leaving the two compartments in front of handles empty; knives are placed in middle compartments. At lunch and dinner meals silver is racked at right side of soiled dish table between dishwasher and the soiled glass station. Using both hands is an

easy, quick method to rack silver. The silver is placed in the racks with fork tines, knife blades, and spoon bowls up towards you.

23. Soup bowls and cups used for French onion soup are soaked in lukewarm soapy water and then scrubbed with a vegetable brush. The reason we have to wash these cups and bowls is because of the melted cheese in the bottom of these dishes. Cheese is a protein food and is affected by a high temperature. The temperature in the wash compartment of the dish machine causes the cheese to cook on the dishes. This means that unless these dishes are scrubbed before they are racked then they will have to be rewashed. This, of course, means more work for you. The scrubbed dishes are then taken to Operator 1 who racks these dishes into the open racks.
24. Egg dishes are soaked in lukewarm, soapy water and then scrubbed with a stiff bristled brush. The scrubbed dishes are then taken to the Operator at the soiled dish table who racks these dishes into the open racks.
25. Breakfast silver is soaked in lukewarm, soapy water and then scrubbed with a stiff, bristled brush. The silver is racked at the drain board of the soaking sink.

26. Operator 1 has tray of cereal bowls at preflush sink. Water is flushed into each bowl. Leftover food is scrapped from each bowl before the bowl is placed on the aluminum tray. After water is flushed into each bowl the operator uses his hand to scrub the inside of the bowl. The water is emptied into the preflush sink.

Summarize the duties of Operator 1, Operator 2, and the operator at the soiled glass station.

ORAL QUIZZ

1. How are the soiled dishes at the south dining room soiled dish table handled?
2. How is leftover food scrapped from the dishes?
3. How are cups, creamers, and soup bowls racked?
4. What dishes are racked into the open racks?
5. How are fruit saucers racked?
6. (a) Where are trays of soiled glasses and soiled silver taken?
(b) Where may trays of soiled glasses and soiled silver be placed if Operator 1 is extremely busy?
7. Where are stacks of soiled trays and trays of empty milk bottles placed?
8. How are empty glass racks transported to the soiled glass station?
9. In what side of the rack are the dinner plates racked?
10. In racking flat dishes in the cross dowel racks, name the various ways in which a variety of dishes may be racked.
11. How are flat dishes prewashed before being pushed in- to the dish machine?
12. How is the soiled dish station cleaned after each meal?

13. What kind of brush is used to scrub:
- (a) plastic salad bowls
 - (d) eg, dishes
 - (b) casserole dishes
 - (e) breakfast silver
 - (c) custard cups
 - (g) soup bowls and cups
used for French
onion soup?
14. How are glasses racked?
15. How is silver placed into the silver racks?
16. How are cereal bowls prewashed?
17. (a) Where is the lunch and dinner silver racked?
(b) Where is the breakfast silver racked?
18. What are the duties of Operator 1?
19. What are the duties of Operator 2?
20. What are the duties of the operator at the soiled glass station?

TITLES OF ADDITIONAL PHOTOGRAPHS OF SOILED DISH
STATION PROCEDURES

At a second meeting of the training class, 7 additional photographs could be shown. The titles, numbered to correspond with the photograph, as follows:

27. Operator 1 may use a plate scraper to scrap food waste from a dinner plate and other dishes.
28. Operator 1 stacks a saucer and a dinner plate, after scrapping, in neat piles to the right of garbage hole 1.
29. Operator 1 receives a tray of soiled silver from the trayveyor. He takes this tray to operator at soiled glass station.
30. Operator 2 picks up a stack of 7 dinner plates.
31. The cross dowel rack load: 1 row of dinner plates and 2 rows of dessert plates,
32. Operator 1 scraps food waste from cereal bowls and places the bowls on an aluminum tray.
33. Scrubbed cereal bowls are racked between every 3 dowels in the open racks.

TITLES OF PHOTOGRAPHS OF PROCEDURES
USED AT OTHER DISHROOM STATIONS

The titles, numbered to correspond with the photographs, follow:

34. Breakfast silver is placed in 4 compartment perforated racks and soaked before being scrubbed.
35. Wash hands thoroughly before handling clean dishes, silver, glasses, and trays.
36. Before inspection, racks of clean dishes and silver are allowed to drain and air dry with the aid of the electric fan.
37. Wipe glass fruit dishes with a clean towel.
33. Handle clean cups by their handles.
39. Inspect and then place teapots with tops and creamers on aluminum trays on the overhead shelf.
40. Handle clean soup bowls by placing both hands around the sides of the bowl. Place on the clean dish temporary storage table.
41. Place stained cups on the reject shelf located above the clean dish temporary storage table.
42. After racks of silver have been sent through the dish machine twice, rinse these racks with the hose located at the end of the dish machine.
43. Rinse racks of plastic salad bowls with the hose

- located at the end of the dish machine. Plastic salad bowls are not sent through the dish machine.
44. Handle clean flat dishes by placing the thumb near and parallel to the edge of the plate with the 4 fingers underneath.
 45. Carefully place one plate on top of the other.
 46. Wipe the bottoms of clean glasses with a clean towel.
 47. To remove fruit juice and iced tea glasses from the rack: place an inverted aluminum tray on top of the rack. Invert the rack so that these glasses are removed from the rack.
 48. Stack 3 racks of clean glasses together making sure that each corner prong on each rack interlocks.
 49. To remove clean silver from racks: use a clean towel to handle knife blades, fork tines, and spoon handles. Use both hands to remove silver from the rack.
 50. Silver is held in the towel in the left hand. Grasp knife blades, spoon handles and/or fork handles with the bare right hand.
 51. Don't overload! Load dumb waiter with a variety of china, glasses, silver, and trays. Place the heaviest load on the left side of the dumb waiter.
 52. Wash bakelite trays with a stiff bristled brush.
 53. To remove trays from wash and rinse sinks: lift the stack of trays to its widest side by means of a metal hook.

54. To wipe trays: wipe bottom of tray first; flip tray over to its topside onto a similar stack of trays located on operator's right. Then wipe topside of tray.
55. A dirty dinner plate and soup bowl which had not been prerinsed before racking.
56. The wrong way:
Do not rack glass fruit dishes between china dishes.
57. The wrong way: Do not over-crowd racks by placing dishes improperly in racks.
58. The wrong way: Do not use another dish to scrap leftover food from dishes.

JOB DESCRIPTION OF DISHROOM OPERATOR 1
FOR LUNCH AND DINNER MEALS

JOB LOCATION Right side of soiled dish table to receive trays delivered by trayveyor from north dining room.

JOB CONTROLS Works under general supervision of Dish-room Foreman

WORK PERFORMED

1. Picks up tray of soiled dishes as it reaches soiled dish table from trayveyor. Places tray of soiled dishes on stack of soiled trays in front of him.
2. Scraps leftover food from cups, soup bowls, fruit saucers, glass dishes, creamers and teapots into garbage hole 1.
 - a. Scraps, using either side of bare left hand or a plate scraper.
3. Racks cups, soup bowls, fruit saucers, glass dishes, creamers, and teapots immediately into open racks.
 - a. Racks, without scrapping, sugar bowls with tops, teapot tops, and ash trays into open racks.
4. Scraps leftover food from dinner plates, dessert plates, bread and butter plates, casserole dishes, plastic salad bowls, custard cups and saucers into garbage hole 1.
 - a. Scraps, using either side of bare left hand or a plate scraper.
5. Stacks dinner plates, dessert plates, bread and butter plates, custard cups, casserole dishes, plastic salad bowls and saucers in appropriate piles of like size and shape on soiled dish table to his right and to right of garbage hole 1.

6. Takes the following, as received from trayveyor, to Operator 7:
 - a. Trays of soiled silver
 - b. Trays of soiled glasses
 - c. Places empty glass rack on dollie, locatedbeneath soiled dish table, and pushes dollie to the same operator.
7. Places trays of empty milk bottles, as received from trayveyor, on soiled tray table. Places stacks of soiled empty trays on same table.
8. Repeats steps 1 through 7 throughout serving period until all dishes have been racked in open racks and trays, bottles, silverware, and glasses and glass racks have been delivered to their proper stations.
9. Helps clean soiled dish table after completion of above tasks.
10. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 2
FOR LUNCH AND DINNER MEALS

- JOB LOCATION Left side of soiled dish table near tray-
veyor from north dining room.
- JOB CONTROLS Works under general supervision of Dish-
room Foreman
- WORK PERFORMED
1. Removes empty cross dowel rack from rack table and places this rack beside open rack on soiled dish table.
 2. Racks flat dishes and aluminum trays into cross dowel racks.
 3. Pushes filled cross dowel racks to preflush sink; raises right hand and pulls down preflush hose to flush flat dishes. Performs this same operation for aluminum trays.
 4. Pushes cross dowel racks to corner of dish machine; turns rack at right angles and pushes rack into entrance of dish machine.
 5. Pushes filled open racks, as necessary, to corner of dish machine, turns rack at right angles and pushes racks into entrance of dish machine.
 6. Turns to left; picks up empty cross dowel rack and/or empty open rack from rack table. Places cross dowel rack on soiled dish table. Places open rack either on soiled dish table or on floor by pillar located to his right.
 7. Repeats operations 1 through 6 throughout serving period until all dishes have been racked and placed into entrance of dish machine.
 8. Helps clean soiled dish table after completion of above tasks.

9. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver with silver polish, as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 3
FOR LUNCH AND DINNER MEALS

JOB LOCATION U-shaped area of clean dish table

JOB CONTROLS Works under general supervision of Dish-
room Foreman

WORK PERFORMED

1. Guides dish racks as they come from rinse compartment of dish machine pushing open racks to left side of clean dish table and cross dowel racks to right side of clean dish table.
2. Allows time for china to drain and air dry with the aid of electric fan located in front of clean dish table.
3. Inspects and/or rejects clean flat dishes and aluminum trays in cross dowel racks.
 - a. Stacks clean flat dishes according to size and shape and places in orderly piles and places on clean dish temporary storage table located to his right and to left of dumb waiter.
 - b. Stacks clean aluminum trays; places either on clean dish temporary storage table or on shelf directly below clean dish table.
 - c. Places dishes to be rewashed on shelf to his left.
 - d. Places dishes to be scoured on shelf located to his right above clean dish temporary storage table.
4. Places empty open and cross dowel racks on rack table.
5. Helps load clean dishes, silverware, glasses, bakelite trays and aluminum trays on dumb waiter.

6. Helps inspect and stack dishes from open racks when time permits.
7. Repeats steps 1 through 6 throughout serving period until all racks have emerged from rinse compartment of dish machine.
8. Cleans own working area.
9. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 4
FOR LUNCH AND DINNER MEALS

JOB LOCATION Left side of clean dish table

JOB CONTROLS Works under general supervision of Dish-
room Foreman

WORK PERFORMED

1. Allows time for china to drain and air dry with aid of electric fan located directly in front of clean dish table.
2. Inspects and/or rejects clean dishes from open racks.
 - a. Places soup bowls and fruit saucers in orderly stacks on clean dish temporary storage table.
 - b. Wipes glass dishes with clean towel; places on aluminum tray located on shelf in front of him.
 - c. Places teapots with tops, sugar bowls with tops, ash trays, casserole dishes, custard cups, and creamers on aluminum trays located on shelf in front of him.
 - d. Places cups, on their sides, in cup boxes as follows:
 1. 7 cups per row; 5 rows per box; 3 cups, open ends down, are placed on the top of each of these rows.
 2. To keep cups in a straight row:
 - a. Insert first 3 cups in each row with the handles turned up.
 - b. The 4th cup in the row has its handle turned down so that the handle rests on the bottom of the box.
 - c. The remaining 3 cups in each row have their handles turned up.

- e. Places dishes to be rewashed on shelf to his left.
 - f. Places dishes to be scoured on shelf located directly above clean dish temporary storage table.
- 3.. Receives filled cross dowel racks of plastic salad bowls from Operator 7.
- a. Takes rack to end of dish machine and rinses plastic bowls with hose located at end of machine.
 - b. Allows plastic bowls to air dry with aid of electric fan located directly in front of clean dish table.
 - c. Removes plastic salad bowls from cross dowel racks; stacks; places on clean dish temporary storage table.
4. Receives silver rack as it emerges from rinse compartment. End containing spoons is nearest him.
- a. Reverses rack so that end of rack containing spoons is away from him.
 - b. Takes rack to dish machine opening and sends rack through machine for second washing.
 - c. Receives silver rack again and rinses silver with hose located at end of dish machine.
 - d. Places racks of silver in a slanting position on edge of clean dish table to allow to air dry before taking to clean silver table located to right of dumb waiter.
5. Pushes empty open rack to Operator 3 who places it on rack table.
6. Helps load clean dishes, silverware, glassware, bakelite trays and aluminum trays on dumb waiter.

7. Helps inspect and stack dishes and aluminum trays from cross dowel racks when time permits.
8. Repeats steps 1 through 7 throughout serving period until all racks have emerged from rinse compartment of dish machine.
9. Cleans own work area.
10. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 5 (FOREMAN)
FOR LUNCH AND DINNER MEALS

JOB LOCATION Circulates within the following work areas:
Dish machine, glass machine, clean silver
table, clean glass table and/or left side
of clean dish table.

JOB CONTROLS Works under general supervision of Dish-
room Supervisor

WORK PERFORMED

1. Prepares dish machine and glass machine for operation. Checks constantly to see that the machines are maintained at the following temperatures:

Dish Machine:

155 - 160 F. for Wash Compartment

170 - 180 F. for Rinse Compartment

Glass Machine:

165 F. for Washing

130 F. for Rinsing

a. Fills dispenser with detergent as needed.

b. Changes water at end of one hour of operation at dinner and supper meals.

c. Thoroughly cleans dish machine and glass machine at end of each meal.
2. Places racks of soiled glasses as received from Operator 7 in glass machine.

a. Operates machine by hand by turning lever on top of machine to right. Allows to wash for one minute.

b. Turns same lever to left to rinse position and allows to rinse for eight seconds. (Counts slowly to eight as follows: one-and-two-and-three-and-etc.)

- c. Removes racks of glasses from glass machine.
 - d. Wipes bottoms of clean water glasses with a clean towel. Stacks 3 racks of clean glass racks together making sure that each corner prong on each rack interlocks.
 - e. Wipes bottom of clean fruit juice and iced tea glasses with a clean towel. Places inverted aluminum tray on top of rack. Inverts rack so that fruit juice and iced tea glasses are removed from rack.
 - f. Helps load racks of glasses and trays of glasses on dumb waiter.
3. Sorts silver in appropriate silver boxes.
- a. Uses a clean towel to handle fork tines, knife blades, and spoon bowls.
 - b. Helps load boxes of clean silver on dumb waiter.
 - c. Places stained silver in appropriate box located on shelf above clean silver table.
 - d. Takes empty silver rack to pillar located between dish machine and glass machine and places rack on floor.
4. May help load clean china, bakelite trays and aluminum trays on dumb waiter.
5. Answers intercom calls from cafeteria serving counter and sees that dishroom operation is providing adequate supplies of dishes, glasses, silver and trays to cafeteria serving counters.
6. Unloads dumb waiter of dirty dishes, empty silver and cup boxes and milk crates.
- a. Carries trays of dirty dishes to corner of dish machine and pushes to Operator 1.

- b. Places empty silver boxes on clean silver table.
 - c. Places empty cup boxes on shelf directly below clean dish table.
 - d. Carries empty milk crates to Operator 6 who carries crates to storage area behind soaking sink.
7. Repeats steps 1 through 6 throughout serving period until all china, glassware, silverware, bakelite trays, and aluminum trays have been placed on dumb waiter.
8. Responsible for assigning all dishroom operators to their stations; to maintain order in dishroom; to train and check the operators in correct dishroom procedures.
9. Responsible for the cleanliness of dishroom.
10. Performs, as necessary, incidental duties as listed below:
- a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 1
FOR LUNCH AND DINNER MEALS

JOB LOCATION Right side of soiled dish table to receive trays, delivered by trayveyor, from south dining room.

JOB CONTROLS Works under general supervision of Dish-room Foreman

WORK PERFORMED

1. Picks up tray of soiled dishes as it reaches soiled dish table from trayveyor. Places tray of soiled dishes on stack of soiled trays in front of him.
2. Scraps leftover food from all dishes into garbage hole 2.
 - a. Scraps, using either side of bare left hand or a plate scraper.
3. Stacks all dishes in orderly piles of like size and shape on appropriate aluminum trays placed in front of him.
 - a. Pushes these filled trays to Operator 7 who then pushes these trays to Operator 1.
4. Pushes the following, as received from trayveyor, to Operator 7:
 - a. Trays of soiled glasses
 - b. Trays of empty milk bottles
 - c. Trays of soiled silver
 - d. Places empty glass rack on dollie and pushes dollie to same operator.
5. Assists Operators 7, 8 and/or 9 as time permits.
6. Repeats steps 1 through 5 throughout serving period until all dishes have been scrapped

and stacked, trays, bottles, silverware, glasses, and glass racks have been delivered to their proper stations.

7. Cleans own work area after completion of assigned tasks.
8. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Soilax or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 7
FOR LUNCH AND DINNER MEALS

- JOB LOCATION Soiled glass station, soaking sink, or left end of soiled tray table.
- JOB CONTROLS Works under general supervision of Dish-room Foreman
- WORK PERFORMED
1. Carries stacks of casserole dishes, custard cups, plastic salad bowls, soup bowls and cups used for French onion soup from operator 1's station and places these dishes in soaking sink containing warm, soapy water.
 2. Washes custard cups, casserole dishes and plastic salad bowls with vegetable brush.
 - a. Racks plastic salad bowls in cross dowel racks and delivers to Operator 4.
 - b. Returns prerinsed custard cups and casserole dishes to Operator 1.
 3. Washes soup bowls and cups used for French onion soup with stiff, bristled brush. Returns the prerinsed soup bowls and cups to Operator 1.
 4. Racks glasses, one in each hand, in appropriate racks. Delivers these racks to Operator 5 who places racks in glass machine.
 5. Racks silver into silver racks in the following order:
 - a. Racks spoons in one end of rack; forks in other end of rack leaving the 2 compartments in front of handle empty; knives in middle compartments.
 - b. Delivers filled racks to Operator 2 who places racks in dish machine opening.
 6. Racks milk bottles into milk crates. Places filled milk crate behind soaking sink.

7. Pushes trays of soiled dishes from south dining room soiled dish station to Operator 1.
8. Repeats steps 1 through 6 throughout serving period until all dishes have been scrubbed; glasses and silverware racked; milk crates filled; trays of dishes delivered to Operator 1 from south dining room.
9. Cleans own working area.
10. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Boilax, or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 3
FOR LUNCH AND DINNER MEALS

- JOB LOCATION Tray washing sink
- JOB CONTROLS Works under general supervision of Dishroom Foreman
- WORK PERFORMED
1. Removes soiled bakelite trays from soiled tray table and south dining soiled dish station onto portable truck. Pushes truck to tray sink.
 2. Places a stack of approximately 50 trays on left drain board of tray washing sink.
 - a. Washes each tray by hand using a stiff, bristled brush.
 - b. Places washed tray, bottom side down, into sink containing hot, soapy water.
 - (1) To remove trays from hot, soapy water lifts stack of trays to their widest side by means of a metal hook.
 - c. Lifts stack of trays and places into a sink containing hot, rinse water.
 - (1) To remove tray from hot, rinse water, lifts stack of trays to their widest side by means of a metal hook.
 3. Lifts stack of trays from rinse water and places stack of trays on right drain board.
 - a. Trays are stacked in a vertical position with narrow end of tray resting on drain board. Top-side of tray faces out.
 - b. Fans trays to and fro to aid in drying.

- c. In order to keep stack of trays in steady position, props first tray in a slanting position with lower edge of tray against edge of drain board and the top edge of tray against top edge of first tray in the stack.
- 4. Repeats steps 1 through 3 throughout serving period until all trays have been washed.
- 5. Assists Operators 7 and 9 as time permits.
- 6. Cleans own working area.
- 7. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 9
FOR LUNCH AND DINNER MEALS

JOB LOCATION Clean tray table

JOB CONTROLS Works under general supervision of Dish-
room Foreman

WORK PERFORMED

1. Removes washed, bakelite trays from drain board and places trays bottom side up, on clean tray table.
2. Wipes bottom of first tray in stack with a clean towel.
 - a. With left hand flips this tray over to its top-side onto a similar stack of trays located on his right.
 - b. Wipes top-side of tray. Continues in this manner until stack of trays have been dried.
3. Loads stack of dried trays onto portable truck. Pushes truck to dumb waiter.
4. Assist Operators 7 and 8 as time permits.
5. Repeats steps 1 through 3 throughout serving period until all trays have been dried.
6. Cleans own working area.
7. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained dishes, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 1
FOR BREAKFAST MEAL

JOB LOCATION Left side of soiled dish table and receives trays, delivered by means of trayveyor, from north dining room.

JOB CONTROLS Works under general supervision of Dishroom Supervisor

WORK PERFORMED

1. Picks up tray of soiled dishes as it reaches soiled dish table from trayveyor. Places tray of soiled dishes on stack of soiled trays in front of him.
2. Scraps leftover food from cups, cereal bowls, fruit saucers, glass dishes, creamers, and teapots into garbage hole 1.
 - a. Scraps, using either side of bare right hand or a plate scraper.
3. Racks cups, fruit saucers, glass dishes, creamers, and teapots immediately into open racks.
4. Places 6 cereal bowls on aluminum trays. Pushes tray to preflush sink and prewashes bowls under preflush hose. Racks scrubbed bowls in open racks.
5. Scraps leftover food from dinner plates, dessert plates, bread and butter plates, and saucers into garbage hole 1.
 - a. Scraps, using either side of bare right hand or a plate scraper.
6. Stacks dinner plates, dessert plates, bread and butter plates, and saucers in orderly piles of like size and shape on soiled dish table.
 - a. The dishes that were used for eggs are stacked in separate piles. These dishes are taken to soaking sink and are soaked and scrubbed before racking.

7. Racks dinner plates, dessert plates, bread and butter plates, saucers (includes scrubbed egg dishes) and aluminum trays in cross dowel racks.
8. Pushes filled open and cross dowel racks to corner of dish machine; turns rack at right angles and pushes rack into entrance of dish machine.
 - a. Pushes filled silver racks, as received from Operator 3, into entrance of dish machine.
9. Keeps soiled dish table supplied with empty open and cross dowel racks from rack table.
10. May answer intercom calls from cafeteria serving counter.
11. Repeats steps 1 through 10 throughout serving period until all dishes have been racked and placed into entrance of dish machine.
12. Cleans soiled dish table after completion of above mentioned tasks.
13. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained china, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 2
FOR BREAKFAST MEAL

JOB LOCATION Circulates within the following areas:
Clean dish table, clean dish temporary
storage table, dish machine, glass machine,
clean glass table, clean silver table.

JOB CONTROLS Works under general supervision of Dish-
room Supervisor

WORK PERFORMED

1. Prepares dish machine and glass washer for operation. Checks constantly to see that these machines are maintained at the following temperatures:

Dish Machine:

155 - 160 F. for Wash Compartment

170 - 180 F. for Rinse Compartment

Glass Machine:

165 F. for Washing

180 F. for Rinsing

a. Fills dispenser with detergent as needed.

b. Thoroughly cleans dish machine and glass-washer at end of meal.
2. Guides dish racks as they come from rinse compartment of dish machine pushing open racks to left side of clean dish table and cross dowel racks to right side of clean dish table.
3. Allows time for china to drain and air dry with the aid of electric fan located directly in front of clean dish table.
4. Inspects and/or rejects clean dishes and aluminum trays from open and cross dowel racks.

- a. Stacks clean dishes in orderly piles of like size and shape and places on clean dish temporary storage table.
- b. Stacks clean aluminum trays and places either on clean dish temporary storage table or on shelf located below clean dish table.
- c. Places dishes to be rewashed on shelf to his left.
- d. Places dishes to be scoured on shelf located above clean dish temporary storage table.
- e. Wipes glass dishes with clean towel; places on aluminum tray located on shelf above clean dish table.
- f. Places teapots with tops, sugar bowls with tops, ash trays, and creamers on aluminum trays located on shelf above clean dish table.
- g. Places cups, on their sides, in cup boxes as follows:
 1. 7 cups per row; 5 rows per box; 3 cups, open ends down, are placed on the top of each of these rows.
 2. To keep cups in a straight row:
 - a. Insert first 3 cups in each row with the handles turned up.
 - b. The 4th cup in the row has its handle turned down so that the handle rests on the bottom of the box.
 - c. The remaining 3 cups in each row have their handles turned up.
5. Receives silver rack as it emerges from rinse compartment. End of rack which contains the spoons is nearest him.

- a. Reverses rack so that end of rack containing spoons is away from him.
 - b. Takes rack to dish machine opening and sends rack through machine for a second washing.
 - c. Receives silver rack again and rinses silver with hose located at end of dish machine.
 - d. Places racks of silver in a slanting position on edge of clean dish table to allow to air dry before taking to clean silver table, located to the right of dumb waiter.
 - e. Sorts silver into appropriate silver boxes at clean silver table.
 1. Uses a clean towel to handle fork tines, knife blades, and spoon bowls.
 2. Places stained silver in appropriate box located on shelf above clean silver table.
 3. Takes empty silver rack to pillar located between dish machine and glass machine and places rack on floor.
6. Places racks of soiled glasses, as received from Operator 3, into glass machine.
- a. Operates machine by hand by turning lever on top of machine to right. Allows to wash for one minute.
 - b. Turns same lever to left to rinse position and allows to rinse for eight seconds. (Counts slowly to eight as follows: one-and-two-and-three-and, etc.)
 - c. Removes racks of glasses from glass machine.
 - d. Wipes bottoms of clean water glasses with a clean towel. Stacks 3 racks of clean glasses together making sure that each corner prong on each rack interlocks.

- e. Wipes bottoms of clean fruit juice glasses with a clean towel. Places inverted aluminum tray on top of rack. Inverts rack so that fruit juice glasses are removed from rack.
- 7. Loads clean china, glassware, silverware, bakelite trays and aluminum trays on dumb waiter.
- 8. Unloads dumb waiter of dirty dishes, empty silver and cup boxes, and milk crates.
 - a. Carries trays of dirty dishes to corner of dish machine and pushes to Operator 1.
 - b. Places empty cup boxes on shelf directly below clean dish table.
 - c. Places empty silver boxes on clean silver table.
 - d. Carries empty milk crates to Operator 3 who carries crates to storage area behind soaking sink.
- 9. Answers intercom calls from cafeteria serving counter and sees that dishroom operation is providing adequate supplies of dishes, glasses, silver and trays to cafeteria serving counter.
- 10. Places empty open and cross dowel racks on rack table.
- 11. Repeats steps 1 through 10 throughout serving period until all china, glassware, silverware, bakelite trays and aluminum trays have been placed on dumb waiter.
- 12. Cleans work stations upon completion of above mentioned tasks.
- 13. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or

- c. Scours stained china, or
- d. Soaks stained silver in Soilax, or
- e. Polishes silver with silver polish
as needed, or
- f. Mops floor.

JOB DESCRIPTION OF DISHROOM OPERATOR 3
FOR BREAKFAST MEAL

- JOB LOCATION Circulates within the following work areas:
Right side of north dining room soiled dish table, soiled glass table, soaking sink, soiled and clean tray table, tray sink.
- JOB CONTROLS Works under general supervision of Dishroom Supervisor
- WORK PERFORMED
1. Assists Operator 1 at soiled dish table during rush periods.
 2. Carries egg dishes and trays of soiled silver from soiled dish table to soaking sink, and places egg dishes and silver into sinks of warm, soapy water.
 - a. Washes egg dishes and silver with stiff, bristled brush.
 - b. Racks silver into silver rack which is placed on drain board of soaking sink.
 - (1) Carries filled silver rack to entrance of dish machine. Operator 1 pushes rack into entrance of dish machine.
 - c. Returns prewashed egg dishes to Operator 1 who racks the dishes in their proper racks.
 3. Carries trays of soiled glasses from soiled dish table to soiled glass table.
 - a. Racks glasses, one in each hand, into appropriate glass racks.
 - b. Delivers filled glass racks to Operator 2 who places racks in glass machine.
 4. Carries empty glass racks from soiled dish table to soiled glass table. Places racks under soiled glass table.

5. Carries trays of empty milk bottles from soiled dish table to soiled tray table. Places milk bottles in milk crates and places filled milk crates behind soaking sink.
6. Removes soiled bakelite trays from soiled dish table to soiled tray table.
 - a. When time permits, transports soiled bakelite trays from soiled tray table to tray washing sink by means of portable truck.
 - b. Places a stack of approximately 30 trays on left drain board of sink.
 - c. Washes each tray by hand using a stiff, bristled brush.
 - d. Places washed tray, bottom side down, into sink containing hot, soapy water.
 - (1) To remove trays from hot, soapy water, lifts stack of trays to their widest side by means of a metal hook.
 - e. Lifts stack of trays and places into a sink containing hot, rinse water.
 - (1) To remove trays from hot, rinse water, lifts stack of trays to their widest side by means of a metal hook.
 - f. Lifts stack of trays from rinse water and places stack of trays on right drain board.
 - (1) Trays are stacked in a vertical position with narrow end of tray resting on drainboard. Top-side of tray faces out.
 - (2) Fans trays to and fro to aid in drying.

- (3) In order to keep stack of trays in a steady position, props first tray in a slanting position with the lower edge of tray against edge of drain board and the top edge of tray against top edge of first tray in the stack.
- g. Removes washed, bakelite trays from drain board and places trays, bottom side up, on clean tray table.
- h. Wipes bottom of first tray in stack with a clean towel.
 - (1) With left hand, flips this tray over to its top-side onto a similar stack of trays located on his right.
 - (2) Wipes top-side of tray. Continues in this manner until stack of trays have been dried.
- i. Loads stacks of dried trays onto portable truck. Pushes truck to dumb waiter.
- 7. Repeats steps 1 through 6 throughout serving period until egg dishes have been scrubbed, silver scrubbed and racked; glasses racked, milk bottles placed in milk crates. When time permits, washes and dries trays.
- 8. Cleans own work stations upon completion of above mentioned tasks.
- 9. Performs, as assigned, incidental duties as listed below:
 - a. Washes walls, or
 - b. Sweeps floor, or
 - c. Scours stained china, or
 - d. Soaks stained silver in Soilax, or
 - e. Polishes silver with silver polish as needed, or
 - f. Mops floor.

PRODUCTION COST OF "DISHROOM PROCEDURES"

I. Photographs:

Photographs, 66, 4 x 5 inch, black and
white, at \$.10 (includes 8 retakes) \$ 6.60

Printing of legends on 2 photographs
at \$.20 .40

Enlarging 16 photographs to 11 x 13
inch size and mounting on heavy card-
board at \$.50 8.00

II. Crest Board:

Sheets, 30 x 40 inches, at \$.80 per
sheet (for mounting 32 photographs
which may be projected by means of
Opaque Projector. Used for training
class.)

20, 7-1/8 x 7-3/16 inch, cards per
sheet of Crest Board.

1.60
Total \$ 16.60

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